

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1 (original): A refurbisher for treating at least one intervertebral
2 disc, said refurbisher comprising:
3 (a) a ribbon-like energy application head having an energy application
4 region and a tissue protecting region; and
5 (b) a control member operationally connected to said ribbon-like
6 energy application head, said control member suitable for
7 controlling said ribbon-like energy application head during
8 treatment of said at least one intervertebral disc.

1 Claim 2 (original): The refurbisher of claim 1 wherein said ribbon-like
2 energy application head is expandable and contractible.

1 Claim 3 (original): The refurbisher of claim 1 wherein said ribbon-like
2 energy application head has at least one energy transmission layer.

1 Claim 4 (original): The refurbisher of claim 1 wherein said ribbon-like
2 energy application head has at least one heat generation layer.

1 Claim 5 (original): The refurbisher of claim 1 wherein said ribbon-like
2 energy application head has at least one insulation layer.

1 Claim 6 (original): The refurbisher of claim 1 wherein said ribbon-like
2 energy application head has at least one layer for deflecting the overlying dural sac and
3 nerve roots to protect them from the effects of the thermal treatment.
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1 Claim 7 (original): The refurbisher of claim 1 wherein said ribbon-like
2 energy application head has at least one expandable and contractable layer.
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1 Claim 8 (original): The refurbisher of claim 1, said ribbon-like energy
2 application head further comprising:

- 3 (a) a bottom layer having a heat generator therein;
- 4 (b) a middle layer providing thermal insulation; and
- 5 (c) a top layer for deflecting the overlying dural sac and nerve roots to
6 protect them from the effects of the thermal treatment.
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1 Claim 9 (original): An apparatus for treating at least one intervertebral
2 disc, said apparatus comprising:

- 3 (a) an expandable and contractible energy application head having an
4 energy application region and a tissue protecting region; and
- 5 (b) said energy application head having a distance between said
6 energy application region and said tissue protecting region wherein
7 said distance is variable to protect tissue associated with said at
8 least one intervertebral disc.
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1 Claim 10 (original): The apparatus of claim 9, said energy application
2 head further comprising:

- 3 (a) smooth, rounded edges;
- 4 (b) a domed center section; and
- 5 (c) said edges sloped to said domed center section;
- 6 (d) wherein said energy application head has a wedge-shaped head
7 geometry.

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1 Claim 11 (original): The apparatus of claim 9, wherein said energy
2 application head is a ribbon-like energy application head having an energy application
3 region and a tissue protecting region.

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1 Claim 12 (original): The apparatus of claim 9, said energy application
2 region is selected from the group consisting of:

- 3 (a) a flexible energy application region;
- 4 (b) a flat energy application region;
- 5 (c) an concave energy application region;
- 6 (d) a convex energy application region; and
- 7 (e) a malleable energy application region.

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1 Claim 13 (original): The apparatus of claim 9, said distance between said
2 energy application region and said tissue protecting region being variable in proportion
3 to the amount of energy being delivered to the intervertebral disc.

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1 Claim 14 (original): The apparatus of claim 9, said distance between said
2 energy application region and said tissue protecting region being automatically variable.

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1 Claim 15 (original): The apparatus of claim 9, said distance between said
2 energy application region and said tissue protecting region being manually variable.

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Claim 16 (original): The apparatus of claim 9, said distance between said energy application region and said tissue protecting region being variable by mechanically expanding and contracting said expandable and contractible energy application head.

Claim 17 (original): The apparatus of claim 9 further including an inflatable portion for expanding and contracting said expandable and contractible energy application head.

- Claim 18 (original): An energy application device, said device comprising:
- (a) an energy application head having an energy application region and a tissue protecting region;
 - (b) a distance between said energy application region and said tissue protecting region;
 - (c) said energy application head having a contracted state in which said distance is a minimum distance;
 - (d) said energy application head having an expanded state in which said distance is a protecting distance greater than said minimum distance; and
 - (e) means for varying said distance between said minimum distance and said protecting distance.

1 Claim 19 (original): The device of claim 18, said energy application head
2 further comprising:

- 3 (a) smooth, rounded edges;
- 4 (b) a domed center section; and
- 5 (c) said edges sloped to said domed center section;
- 6 (d) wherein said energy application head has a wedge-shaped head
7 geometry.

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1 Claim 20 (original): The device of claim 18, wherein said energy
2 application head is a ribbon-like energy application head having an energy application
3 region and a tissue protecting region.

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1 Claim 21 (currently amended): A method for thermally treating an
2 intervertebral disc while thermally protecting vulnerable tissues, said method comprising
3 the steps of:

- 4 (a) gaining access to a vertebral column;
- 5 (b) epidurally approaching the posterior aspect of said at least one
6 intervertebral disc with [[an]] a ribbon-like energy application head
7 having an energy application region, a tissue protecting region, and
8 a distance defined between said energy application region and said
9 tissue protecting region;
- 10 (c) varying said distance to protect tissue associated with said at least
11 one intervertebral disc to maintain a safe temperature in vulnerable
12 tissues near said at least one intervertebral disc; and
- 13 (d) applying energy to a posterior aspect of said at least one
14 intervertebral disc while maintaining a safe temperature in said
15 vulnerable tissues near said at least one intervertebral disc.

1 Claim 22 (original): The method of claim 21, further comprising at least
2 one step selected from the group of steps consisting of:

- 3 (a) evaluating an extent of disc injury;
4 (b) calculating an amount of energy needed to refurbish thermally said
5 at least one intervertebral disc;
6 (c) monitoring an amount of energy delivered and a temperature in
7 vulnerable tissues around said at least one intervertebral disc;
8 (d) observing and evaluating an amount of shrinkage and
9 strengthening of said at least one intervertebral disc to determine
10 an intensity and duration of further energy delivery; and
11 (e) verifying that said shrinkage and strengthening of said at least one
12 intervertebral disc is mechanically successful.

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1 Claim 23 (new): The refurbisher of claim 1 wherein said ribbon-like
2 energy application head is an expandable and contractible energy application head,
3 said an expandable and contractible energy application head further including an
4 inflatable portion for expanding and contracting said expandable and contractible
5 energy application head.

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1 Claim 24 (new): The device of claim 18 further comprising an inflatable
2 portion for expanding and contracting said energy application head between said
3 expanded state and said contracted state.

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1 Claim 25 (new): The method of claim 21, said step of varying said
2 distance further comprising the steps of expanding an inflatable portion to increase said
3 distance and contracting said inflatable portion contract to decrease said distance.